

WHAT IS CLAIMED IS:

1. A flow control valve assembly comprising:

a housing defining a valve interior and including a first port corresponding to a  
5 main inlet and a second port corresponding to a secondary inlet, an outlet  
longitudinally spaced from said first and second ports, and a valve stem orifice, said  
housing further comprising a wing stop disposed on an external surface of the housing  
adjacent the valve stem orifice;

a poppet seated in the valve interior adjacent the first and second ports and  
10 adapted for rotation to first, second, and third predefined angular positions, the poppet  
occluding the second port when the poppet is rotated to the first angular position,  
occluding the first port when the poppet is rotated to the second angular position, and  
occluding both the first port and the second port when the poppet is rotated to the third  
angular position; and

15 a valve stem partially disposed within the housing at the valve stem orifice and  
mounted for rotation about a longitudinal axis, the valve stem coupled to the poppet for  
rotating the poppet to a selected one of the first, second, and third predefined angular  
positions, the valve stem further comprising a lever arm extending traverse with  
respect to the longitudinal axis of the valve stem, the lever arm adapted to carry a  
20 locking member substantially at a distal end;

wherein the carrying of the locking member by the lever arm results in an  
interference between the locking member and the wing stop on the housing to preclude  
rotation of the valve stem and fix the poppet in the third angular position, thereby  
preventing flow into the valve through the main port and secondary port.

25 2. The flow control valve assembly of Claim 1 wherein the housing further  
comprises a pair of rotational stops along a path of the lever arm, the first rotational  
stop positioned to prevent said lever arm from rotating beyond a position

corresponding to the poppet third angular position, and the second rotational stop positioned to prevent said lever arm from rotating beyond a position corresponding to the poppet first angular position.

5           3.     The flow control valve assembly of Claim 2 where the lever arm includes a loop at a distal end for carrying the locking member, and where the lever arm may be fixed between the first rotational stop and the wing stop when the locking member is carried by the lever arm.

10           4.     The flow control valve assembly of Claim 2 where rotation of the lever arm to an intermediate position between the first and second rotational stops and corresponds to the poppet occupying the second angular position.

15           5.     The flow control valve assembly of Claim 1 wherein the housing includes a protective coating selected from the group of zinc, polyester, and paint.

6.     The flow control valve assembly of Claim 1 wherein the valve stem and lever arm comprise a unitary construction.

20           7.     The flow control valve assembly of Claim 1 further comprising a weather seal and snap ring cooperating to hold the valve stem in the housing at the valve stem orifice.

25           8.     The flow control valve assembly of Claim 1 further comprising a stem pipe mounted to the housing at the first port, the stem pipe oriented perpendicular to a longitudinal axis of the housing and adapted to mate with the outlet of a gas meter.

9. The flow control valve assembly of Claim 8 further comprising an inverted U-shaped pipe adapted to mate with the inlet of a gas meter, the inverted U-shaped pipe spaced from the stem pipe by a crossbar secured to the inverted U-shaped pipe and the stem pipe.

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10. The flow control valve assembly of Claim 9 wherein the inverted U-shaped pipe and crossbar lie in a common vertical plane.

11. A shut off flow control valve assembly adapted to mount to a threaded outlet of a gas meter with auxiliary flow capability comprising:

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a piping having first and second ends, the first end including a threaded coupling for mating with the threaded outlet of the gas meter;

a cylindrical valve housing fixed to the second end of the piping and in fluid communication with the piping, the connection of the piping and the housing defining a main inlet port, the housing further comprising a substantially planar first end, a main inlet bypass port, an outlet, and a wing stop mounted on an external surface of the housing adjacent the substantially planar first end, the cylindrical valve housing further comprising rotational stops projecting from said substantially planar first end;

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a cylindrical poppet disposed in the cylindrical valve housing adjacent the main inlet port and the main inlet bypass port to occlude said ports, and including a window serving to selectively open one of said main inlet port and said main inlet bypass port;

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a valve stem mounted to the cylindrical housing and coupled to the cylindrical poppet, the valve stem including a lever arm adapted for rotation in a plane adjacent the first end of the cylindrical housing between the rotational stops of the cylindrical valve housing wherein the rotation of the lever arm controls the position of the poppet window to open the main inlet port and the main inlet bypass port, the lever arm configured for receiving a locking member to fix the lever arm in a shut off position between a rotational stop and the wing stop, said shut off position corresponding to a

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poppet window position adjacent neither the main inlet port nor the main inlet bypass port.

12. A flow control valve assembly comprising:

5 a housing defining a valve interior and including a first port corresponding to a main inlet and a second port corresponding to a secondary inlet, an outlet longitudinally spaced from said first and second ports, and a valve stem orifice, said housing further comprising a wing stop disposed on an external surface of the housing adjacent the valve stem orifice;

10 a flow control means for selectively opening said first port, said second port, and for closing said first and second ports; and

a valve stem means partially disposed within the housing at the valve stem orifice and mounted for rotation about a longitudinal axis, the valve stem means coupled to the flow control means, the valve stem means further comprising a  
15 rotational position selecting means for selecting the position of the valve stem means and further comprising locking means for fixing the flow control means to close said first and second ports.

13. A method of mass producing integral meter assemblies for selective  
20 connection between selected vertical risers terminating respective unions and meter assemblies having respective meter inlet and outlet fittings spaced a selected lateral distance apart and mounted in selected spaced relationship to respective residence walls' respective inlet gas couplings projecting perpendicularly therefrom and including:

25 determining the predetermined distance and the spaced relationship;

fabricating a plurality of meter bars sets by selecting respective metal inlet pipes of a selected length and forming them into U-shapes and forming respective

extremities with inlet fittings for connection to the selected ones of the unions and on the other end an outlet fitting for selective connection with the respective meter inlets;

selecting pipe stems, and forming the respective ends thereof with inlet fittings for connection with the respective meter outlets and mounting on the respective other  
5 ends thereof right angle outlet valves;

selecting a metal bar;

positioning the respective inlet pipes, and stems in respective positions to space the respective meter bar outlets and inlet fittings spaced the predetermined distance apart and the outlet of the inlet valve oriented for coupling with the respective

10 residential fittings; and

welding the inlet pipe and stem to the opposite extremities of the bar to hold such inlet and stem pipes in position; and

storing the meter bar sets in inventory for subsequent installation.

15 14. The method according to claim 13 that includes:  
selecting the inlet fitting as a union including a hex-nut.

15. The method according to claim 13 wherein:  
affixing of the opposite ends of said bar includes welding.

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16. The method according to claim 13 wherein:  
selecting the inlet fitting includes selecting a union including a hex-nut.

17. The method according to claim 13 wherein:  
25 selecting the valve includes selecting a valve with a threaded connection for  
connecting to the resident's inlet fitting.

18. Factory fabricated integral meter bar device for connecting a meter mounted in a predetermined orientation relative to an inlet coupling projecting from a structural wall wherein the meter includes inlet and outlet fittings spaced apart a predetermined distance, such device including:

- 5 an inverted, U-shaped inlet pipe having an inlet formed with a leg for connection with a gas supply riser and a second leg including an outlet fitting for connection with the meter inlet fitting, such device including a vertical stem pipe spaced such predetermined distance from such second leg and terminating at an end in an inlet fitting for connection with the meter outlet fitting;
- 10 a right-angle inlet valve welded to the opposite end of the stem pipe and including a connector for connection with inlet coupling; and
- a bar joined on opposite ends with such inlet loop and such stem to hold the inlet loop and stem in spaced relationship whereby the bar device may be mass-produced and stored in inventory for subsequent use in installing such meters
- 15 between the respective risers and resident's inlet fittings at home sites.

19. The meter bar assembly, according to claim 18 wherein:  
said inlet loop, bar and stem are in a common plane.

20 20. A meter bar device according to claim 18 wherein:  
said meter inlet and outlet fittings are constructed of unions including hex-nuts.

21. The meter bar assembly, according to claim 18 wherein:  
said loop, bar, stem and valve are coated with a protective coating selected from

25 the group of polyester, zinc, and paint.

22. A meter bar device according to claim 18 wherein:  
the bar is welded on its opposite ends to the respective inlet loop and stem.